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09/833,219	04/10/2001	Eric Klinker	21089000100	1676

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EXAMINER	
TSEGAYE, SABA	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/833,219	Applicant(s) KLINKER ET AL.	
	Examiner Saba Tsegaye	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *19-25* is/are allowed.

6)☒ Claim(s) *1-18,26 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. Claims 1-9, and 14-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Bertin et al. (US 6,400,681).

Regarding claim 1, Bertin discloses, in Fig. 2, a method for maintaining a traffic service level for data communicated by a computer network having a source (213-217), the computer network coupled to at least one of a plurality of networks (200, 211, 214, 215, 216, 217), each of the networks includes a plurality of paths (210, 209) for transporting the data communicated to a destination (212), where at least two of the networks are electrically coupled at an interconnection point and where the data communicated flows through the interconnection point (column 6, 56-67), the method comprising:

monitoring the traffic service level associated with one of the plurality of paths between the source and the destination using passive flow analysis (column 6, lines 3-17; column 8, lines 29-44; column 22, lines 4-12);

determining whether the traffic service level associated with the one of the plurality of paths meet one or more performance metrics (column 7, lines 24-30; column 12, lines 2-67);

indicating a service level violation when a flow of data communicated over the monitored path between the source and the destination fails at least one of the performance metrics (column 12, lines 18-44); and

using an active mechanism to select an alternate path from the other of the plurality of paths between the source and the destination (column 17, line 55-column 18, line 54; column 19, line 63-column 20, line 37),

wherein the alternate path provides for a traffic service level that resolves the service level violation from the source to the destination (column 17, line 55-column 18, line 54).

Regarding claim 2, Bertin discloses a method wherein selecting the alternate path further comprises:

monitoring the traffic service level associated with the other of the plurality of paths between the source and the destination (column 17, line 55-column 18, line 54);

determining a subset of alternative paths that meet the one or more performance metrics, where the subset of alternative paths is configured to transport data between the source and the destination (column 17, line 55-column 18, line 54);

choosing an optimized path between the source and the destination using a set of statistical data from the subset of alternative paths (column 12, lines 2-12; lines 59-67; column 13, lines 9-23); and

applying the optimized path (column 5, lines 25-37), wherein the optimized path resolves service level violations associated with the path from the destination to the source (column 13, lines 9-23).

Regarding claim 3, Bertin discloses the method wherein choosing the optimized path comprises:

storing the monitored flows of data communicated over each of the plurality of paths as statistical data (column 12, lines 2-12; lines 59-67); and

retrieving the statistical data (column 12, lines 13-17).

Regarding claim 4, Bertin discloses the method further comprising routing the flow of data from the monitored path that fails at least one of the performance metrics paths to the alternate path (column 12, lines 18-67).

Regarding claim 5, Bertin discloses the method wherein routing the flow of data includes changing one or more source addresses in a routing table to include the optimized path form the destination to the source (column 10, lines 30-40).

Regarding claim 6, Bertin discloses the method further comprising storing the monitored flows of data communicated over each of the plurality of paths as statistical data (column 9, lines 33-47).

Regarding claim 7, Bertin discloses the method wherein the optimized path is applied to a routing table available to the network (column 10, lines 4-40; column 13, line 25-column 17, line 53).

Regarding claim 8, Bertin discloses the method wherein the optimized path is an egress path (column 7, lines 1-4).

Regarding claim 9, Bertin discloses the method wherein the one of the plurality of paths is a default route path (column 20, lines 33-36).

Regarding claim 14, Bertin discloses the method wherein monitoring the traffic service level associated with each of the plurality of paths between the source and the destination further comprises:

determining whether the flow of data is a specific traffic type (column 11, lines 7-15); and

classifying the flow of data as the specific traffic type (column 11, lines 7-15; column 13, lines 1-8), wherein the specific traffic type is used in routing the flow of data (column 13, lines 1-16).

Regarding claim 15, Bertin discloses, in Fig. 2, a method for maintaining a traffic service level for data communicated by a computer network having a source (213-217), the computer network coupled to at least one of a plurality of networks (211, 214, 200), each of the networks includes a plurality of paths (210, 209) for transporting the data communicated to a destination (212), where at least two of the networks are electrically coupled at an interconnection point and where the data communicated flows through the interconnection point (column 6, lines 56-67), the method comprising:

capturing one or more data packets flowing from a source address to a destination address (column 7, lines 9-30);

parsing the one or more data packets to retrieve packet information (column 7, lines 24-30);

combining the packet information from the one or more data packets into one or more traffic flows (column 7, lines 9-30, column 8, lines 45-51);

interpreting a service level for each of the one or more traffic flows from the packet information of the one or more captured data packets (column 7, lines 45-55; column 8, lines 17-28);

correlating a traffic flow characteristic with the interpreted service level for each of the one or more traffic flows (column 7, lines 45-55; column 8, lines 17-28);

grouping the traffic flow characteristic with an associated destination (column 8, lines 45-51); and

forming an aggregate service level from two or more traffic flow characteristics with the associated destinations (column 8, lines 45-51; column 10, lines 56-61),

determining an alternate path from the source addresses to the destination addresses based at least in part on the aggregate service level (column 6, lines 9-13; column 10, lines 56-61; column 22, lines 4-12).

Regarding claim 16, Bertin discloses the method wherein capturing the one or more data packets further comprises:

filtering data packets according to a filtering criterion (column 7, lines 24-39); and

removing the one or more packets up from the network (column 7, lines 45-67).

Regarding claim 17, Bertin discloses the method, wherein the packet information includes a source address and a destination address (column 7, lines 55-61).

Regarding claim 18, Bertin discloses the method, further comprising:

receiving the grouped traffic flow characteristics for the associated destination (column 11, lines 45-52);

receiving a service level metric (column 11, lines 53-57);

interpreting whether the service level metric is violated (column 11, lines 58-60); and

upon such a violation, providing feedback for use in resolving such a violation (column 11, lines 61-67).

Claim Rejections - 35 USC § 103

2. Claims 10-13, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertin in view of Medard et al (US 6,047,331).

Bertin discloses all the claim limitations as stated above, except for a method that transmitting one or mort probes over at least one of a plurality of networks from the source to the destination; receiving probes returning from the destination; and wherein the probe includes information about the network

Regarding claim 10, Medard teaches transmitting one or more probes over at least one of a plurality of networks from the source to the destination (column 9, lines 44-55); and

Receiving one or more probes returning from the destination, wherein each returning probe includes alternative path information, which is used to determine the alternate path (column 9, line 44-column 10, line 5).

Regarding claim 11, Medard teaches that at least one probe includes information about

the network latency of each of the plurality of paths from the source to the destination (column 11, lines 38-55).

Regarding claim 12, Medard teaches that at least one probe includes information about the network loss of each of the plurality of paths from the source to the destination (column 9, lines 44-55).

Regarding claim 13, Medard teaches that at least one probe includes information about network jitter of each of the plurality of paths from the source to the destination (column 9, lines 58-65).

It would have been obvious to one ordinary skill in the art at the time the invention was made to add a method that transmitting one or mort probes over at least one of a plurality of networks from the source to the destination; receiving probes returning from the destination; and wherein the probe includes information about the network, such as that suggested by Medard, in the system of Bertin in order to implement automatic protection switching in networks.

Regarding claims 26 and 27, Bertin discloses all the claim limitations as stated above, except for computer code.

Medard teaches a method and apparatus for planning and implementing automatic protection switching in networks. Further, Medard teaches that the method functions are implemented on computer systems (column 22, lines 59-67).

It would have been obvious to one ordinary skill in the art at the time the invention was made to use computer code, such as that suggested by Medard, in the system of Bertin in order to defines functions that can delivered to the destinations in many forms. The benefit using computer code device is that programs can be changed and upgraded and new futures are added easily than hardware changes.

Allowable Subject Matter

3. Claims 19-25 are allowed.

Response to Arguments

4. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues (Remarks, page 13) that Bertin does not disclose parsing one or more data packets to determine performance metrics associated with the selected path. However, Examiner disagrees with Applicant contention. Bertin clearly discloses that the incoming data packets are selectively routed according to the information contained in the header of the data packets. In order to provide the various service levels, specific information is retrieved from the header of the packets. Such extracted information from the header includes source addresses, destination addresses and information about QoS requirements.

Still on page 13, Applicant agues that Bertin only teaches "a method of receiving a data packet for the purpose of routing—which requires interfering with—the data packet." The

argument, however, is not found to be convincing. Since the Bertin reference deals with QoS, in addition to the basic packet routing function the network nodes provide ancillary services such as: determination of routing paths; directory services like retrieving and updating information about network users and resources; marinating of a consistent view of the physical network topology and reservation of resources.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (703) 308-4754. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. Thé fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
May 11, 2004

JOHN PEZZLO
PRIMARY EXAMINER